O3CO   *0280*   *OIPE*

Serial Number: __10/002,854__

CRF Processing Date: __12/17/2001__
Edited by: _____
Verified by: _____ (STIC staff)

ENTERED

- [ ] Changed a file from non-ASCII to ASCII. #4

- [ ] Changed the margins in cases where the sequence text was wrapped down to the next line.

- [ ] Edited a formal error in the Current Application Data section, specifically: _____

- [ ] Edited the Current Application Data section with the actual current number. The number inputted by the applicant was [ ] the prior application data; or [ ] other _____.

- [ ] Added the mandatory heading and subheadings for "Current Application Data".

- [ ] Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.

- [ ] Changed the spelling of a mandatory field (the headings or subheadings), specifically: _____

- [ ] Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: _____

- [ ] Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: _____

- [ ] Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.

- [ ] Inserted colons after headings/subheadings. Headings edited included: _____

- [ ] Deleted extra, invalid, headings used by an applicant, specifically: _____

- [ ] Deleted: [ ] non-ASCII "garbage" at the beginning/end of files; [ ] secretary initials/filename at end of file; [ ] page numbers throughout text; [ ] other invalid text, such as _____

- [ ] Inserted mandatory headings, specifically: _____

- [ ] Corrected an obvious error in the response, specifically: _____

- [ ] Edited identifiers where upper case is used but lower case is required, or vice versa.

- [ ] Corrected an error in the Number of Sequences field, specifically: _____

- [ ] A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.

- [ ] Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____

- [✓] Other: __Seq 2 - corrected amino acid numbering__

_____

Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

3/1/95

```
            RAW SEQUENCE LISTING             DATE: 12/17/2001
            PATENT APPLICATION: US/10/002,854  TIME: 20:19:56

            Input Set : A:\Pto.amc
            Output Set: N:\CRF3\12172001\J002854.raw
```

```
  4 <110> APPLICANT: Scadden, David T.
  5         Poznansky, Mark C.
  6         Olszak, Ivona T.
  7         Brown, Edward M.
  9 <120> TITLE OF INVENTION: THE CaR RECEPTOR AS A MEDIATOR OF
 10         MIGRATORY CELL CHEMOTAXIS AND/OR CHEMOKINESIS
 13 <130> FILE REFERENCE: M0765/7038/ERG/KA
C--> 15 <140> CURRENT APPLICATION NUMBER: US/10/002,854
C--> 15 <141> CURRENT FILING DATE: 2001-11-01
 15 <150> PRIOR APPLICATION NUMBER: PCT/US00/15440
 16 <151> PRIOR FILING DATE: 2000-06-02
 18 <160> NUMBER OF SEQ ID NOS: 2
 20 <170> SOFTWARE: FastSEQ for Windows Version 3.0
 22 <210> SEQ ID NO: 1
 23 <211> LENGTH: 3361
 24 <212> TYPE: DNA
 25 <213> ORGANISM: Homo sapiens
 27 <220> FEATURE:
 28 <221> NAME/KEY: CDS
 29 <222> LOCATION: (29)...(3262)
 30 <223> OTHER INFORMATION: Ca-sensing Receptor
 32 <400> SEQUENCE: 1
 33  tcccttgccc tggagagacg gcagaacc atg gca ttt tat agc tgc tgc tgg      52
 34                              Met Ala Phe Tyr Ser Cys Cys Trp
 35                               1               5
 37  gtc ctc ttg gca ctc acc tgg cac acc tct gcc tac ggg cca gac cag     100
 38  Val Leu Leu Ala Leu Thr Trp His Thr Ser Ala Tyr Gly Pro Asp Gln
 39      10              15                  20
 41  cga gcc caa aag aag ggg gac att atc ctt ggg ggg ctc ttt cct att     148
 42  Arg Ala Gln Lys Lys Gly Asp Ile Ile Leu Gly Gly Leu Phe Pro Ile
 43  25                  30                  35                  40
 45  cat ttt gga gta gca gct aaa gat caa gat ctc aaa tca agg ccg gag     196
 46  His Phe Gly Val Ala Ala Lys Asp Gln Asp Leu Lys Ser Arg Pro Glu
 47              45                  50                  55
 49  tct gtg gaa tgt atc agg tat aat ttc cgt ggg ttt cgc tgg tta cag     244
 50  Ser Val Glu Cys Ile Arg Tyr Asn Phe Arg Gly Phe Arg Trp Leu Gln
 51              60                  65                  70
 53  gct atg ata ttt gcc ata gag gag ata aac agc agc cca gcc ctt ctt     292
 54  Ala Met Ile Phe Ala Ile Glu Glu Ile Asn Ser Ser Pro Ala Leu Leu
 55          75                  80                  85
 57  ccc aac ttg acg ctg gga tac agg ata ttt gac act tgc aac acc gtt     340
 58  Pro Asn Leu Thr Leu Gly Tyr Arg Ile Phe Asp Thr Cys Asn Thr Val
 59          90                  95                  100
 61  tct aag gcc ttg gaa gcc acc ctg agt ttt gtt gct caa aac aaa att     388
 62  Ser Lys Ala Leu Glu Ala Thr Leu Ser Phe Val Ala Gln Asn Lys Ile
 63  105                 110                 115                 120
 65  gat tct ttg aac ctt gat gag ttc tgc aac tgc tca gag cac att ccc     436
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 66   Asp Ser Leu Asn Leu Asp Glu Phe Cys Asn Cys Ser Glu His Ile Pro
 67                   125                 130                 135
 69   tct acg att gct gtg gtg gga gca act ggc tca ggc gtc tcc acg gca      484
 70   Ser Thr Ile Ala Val Val Gly Ala Thr Gly Ser Gly Val Ser Thr Ala
 71                   140                 145                 150
 73   gtg gca aat ctg ctg ggg ctc ttc tac att ccc cag gtc agt tat gcc      532
 74   Val Ala Asn Leu Leu Gly Leu Phe Tyr Ile Pro Gln Val Ser Tyr Ala
 75               155                 160                 165
 77   tcc tcc agc aga ctc ctc agc aac aag aat caa ttc aag tct ttc ctc      580
 78   Ser Ser Ser Arg Leu Leu Ser Asn Lys Asn Gln Phe Lys Ser Phe Leu
 79           170                 175                 180
 81   cga acc atc ccc aat gat gag cac cag gcc act gcc atg gca gac atc      628
 82   Arg Thr Ile Pro Asn Asp Glu His Gln Ala Thr Ala Met Ala Asp Ile
 83   185                 190                 195                 200
 85   atc gag tat ttc cgc tgg aac tgg gtg ggc aca att gca gct gat gac      676
 86   Ile Glu Tyr Phe Arg Trp Asn Trp Val Gly Thr Ile Ala Ala Asp Asp
 87                   205                 210                 215
 89   gac tat ggg cgg ccg ggg att gag aaa ttc cga gag gaa gct gag gaa      724
 90   Asp Tyr Gly Arg Pro Gly Ile Glu Lys Phe Arg Glu Glu Ala Glu Glu
 91                   220                 225                 230
 93   agg gat atc tgc atc gac ttc agt gaa ctc atc tcc cag tac tct gat      772
 94   Arg Asp Ile Cys Ile Asp Phe Ser Glu Leu Ile Ser Gln Tyr Ser Asp
 95               235                 240                 245
 97   gag gag gag atc cag cat gtg gta gag gtg att caa aat tcc acg gcc      820
 98   Glu Glu Glu Ile Gln His Val Val Glu Val Ile Gln Asn Ser Thr Ala
 99       250                 255                 260
101   aaa gtc atc gtg gtt ttc tcc agt ggc cca gat ctt gag ccc ctc atc      868
102   Lys Val Ile Val Val Phe Ser Ser Gly Pro Asp Leu Glu Pro Leu Ile
103   265                 270                 275                 280
105   aag gag att gtc cgg cgc aat atc acg ggc aag atc tgg ctg gcc agc      916
106   Lys Glu Ile Val Arg Arg Asn Ile Thr Gly Lys Ile Trp Leu Ala Ser
107                   285                 290                 295
109   gag gcc tgg gcc agc tcc tcc ctg atc gcc atg cct cag tac ttc cac      964
110   Glu Ala Trp Ala Ser Ser Ser Leu Ile Ala Met Pro Gln Tyr Phe His
111                   300                 305                 310
113   gtg gtt ggc ggc acc att gga ttc gct ctg aag gct ggg cag atc cca     1012
114   Val Val Gly Gly Thr Ile Gly Phe Ala Leu Lys Ala Gly Gln Ile Pro
115               315                 320                 325
117   ggc ttc cgg gaa ttc ctg aag aag gtc cat ccc agg aag tct gtc cac     1060
118   Gly Phe Arg Glu Phe Leu Lys Lys Val His Pro Arg Lys Ser Val His
119       330                 335                 340
121   aat ggt ttt gcc aag gag ttt tgg gaa gaa aca ttt aac tgc cac ctc     1108
122   Asn Gly Phe Ala Lys Glu Phe Trp Glu Glu Thr Phe Asn Cys His Leu
123   345                 350                 355                 360
125   caa gaa ggt gca aaa gga cct tta cct gtg gac acc ttt ctg aga ggt     1156
126   Gln Glu Gly Ala Lys Gly Pro Leu Pro Val Asp Thr Phe Leu Arg Gly
127                   365                 370                 375
129   cac gaa gaa agt ggc gac agg ttt agc aac agc tcg aca gcc ttc cga     1204
130   His Glu Glu Ser Gly Asp Arg Phe Ser Asn Ser Ser Thr Ala Phe Arg
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RAW SEQUENCE LISTING   DATE: 12/17/2001
PATENT APPLICATION: US/10/002,854   TIME: 20:19:56

Input Set : A:\Pto.amc
Output Set: N:\CRF3\12172001\J002854.raw

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131              380              385              390
133  ccc ctc tgt aca ggg gat gag aac atc agc agt gtc gag acc cct tac      1252
134  Pro Leu Cys Thr Gly Asp Glu Asn Ile Ser Ser Val Glu Thr Pro Tyr
135          395              400              405
137  ata gat tac acg cat tta cgg ata tcc tac aat gtg tac tta gca gtc      1300
138  Ile Asp Tyr Thr His Leu Arg Ile Ser Tyr Asn Val Tyr Leu Ala Val
139          410              415              420
141  tac tcc att gcc cac gcc ttg caa gat ata tat acc tgc tta cct ggg      1348
142  Tyr Ser Ile Ala His Ala Leu Gln Asp Ile Tyr Thr Cys Leu Pro Gly
143  425                  430                  435                  440
145  aga ggg ctc ttc acc aat ggc tcc tgt gca gac atc aag aaa gtt gag      1396
146  Arg Gly Leu Phe Thr Asn Gly Ser Cys Ala Asp Ile Lys Lys Val Glu
147              445              450              455
149  gcg tgg cag gtc ctg aag cac cta cgg cat cta aac ttt aca aac aat      1444
150  Ala Trp Gln Val Leu Lys His Leu Arg His Leu Asn Phe Thr Asn Asn
151              460              465              470
153  atg ggg gag cag gtg acc ttt gat gag tgt ggt gac ctg gtg ggg aac      1492
154  Met Gly Glu Gln Val Thr Phe Asp Glu Cys Gly Asp Leu Val Gly Asn
155          475              480              485
157  tat tcc atc atc aac tgg cac ctc tcc cca gag gat ggc tcc atc gtg      1540
158  Tyr Ser Ile Ile Asn Trp His Leu Ser Pro Glu Asp Gly Ser Ile Val
159          490              495              500
161  ttt aag gaa gtc ggg tat tac aac gtc tat gcc aag aag gga gaa aga      1588
162  Phe Lys Glu Val Gly Tyr Tyr Asn Val Tyr Ala Lys Lys Gly Glu Arg
163  505              510              515                  520
165  ctc ttc atc aac gag gag aaa atc ctg tgg agt ggg ttc tcc agg gag      1636
166  Leu Phe Ile Asn Glu Glu Lys Ile Leu Trp Ser Gly Phe Ser Arg Glu
167              525              530              535
169  gtg ccc ttc tcc aac tgc agc cga gac tgc ctg gca ggg acc agg aaa      1684
170  Val Pro Phe Ser Asn Cys Ser Arg Asp Cys Leu Ala Gly Thr Arg Lys
171              540              545              550
173  ggg atc att gag ggg gag ccc acc tgc tgc ttt gag tgt gtg gag tgt      1732
174  Gly Ile Ile Glu Gly Glu Pro Thr Cys Cys Phe Glu Cys Val Glu Cys
175          555              560              565
177  cct gat ggg gag tat agt gat gag aca gat gcc agt gcc tgt aac aag      1780
178  Pro Asp Gly Glu Tyr Ser Asp Glu Thr Asp Ala Ser Ala Cys Asn Lys
179          570              575              580
181  tgc cca gat gac ttc tgg tcc aat gag aac cac acc tcc tgc att gcc      1828
182  Cys Pro Asp Asp Phe Trp Ser Asn Glu Asn His Thr Ser Cys Ile Ala
183  585              590              595                  600
185  aag gag atc gag ttt ctg tcg tgg acg gag ccc ttt ggg atc gca ctc      1876
186  Lys Glu Ile Glu Phe Leu Ser Trp Thr Glu Pro Phe Gly Ile Ala Leu
187              605              610              615
189  acc ctc ttt gcc gtg ctg ggc att ttc ctg aca gcc ttt gtg ctg ggt      1924
190  Thr Leu Phe Ala Val Leu Gly Ile Phe Leu Thr Ala Phe Val Leu Gly
191              620              625              630
193  gtg ttt atc aag ttc cgc aac aca ccc att gtc aag gcc acc aac cga      1972
194  Val Phe Ile Lys Phe Arg Asn Thr Pro Ile Val Lys Ala Thr Asn Arg
195          635              640              645
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            RAW SEQUENCE LISTING              DATE: 12/17/2001
            PATENT APPLICATION:  US/10/002,854  TIME: 20:19:56

            Input Set : A:\Pto.amc
            Output Set: N:\CRF3\12172001\J002854.raw

197  gag ctc tcc tac ctc ctc ctc ttc tcc ctg ctc tgc tgc ttc tcc agc      2020
198  Glu Leu Ser Tyr Leu Leu Leu Phe Ser Leu Leu Cys Cys Phe Ser Ser
199      650             655             660
201  tcc ctg ttc ttc atc ggg gag ccc cag gac tgg acg tgc cgc ctg cgc      2068
202  Ser Leu Phe Phe Ile Gly Glu Pro Gln Asp Trp Thr Cys Arg Leu Arg
203  665             670             675             680
205  cag ccg gcc ttt ggc atc agc ttc gtg ctc tgc atc tca tgc atc ctg      2116
206  Gln Pro Ala Phe Gly Ile Ser Phe Val Leu Cys Ile Ser Cys Ile Leu
207              685             690             695
209  gtg aaa acc aac cgt gtc ctc ctg gtg ttt gag gcc aag atc ccc acc      2164
210  Val Lys Thr Asn Arg Val Leu Leu Val Phe Glu Ala Lys Ile Pro Thr
211          700             705             710
213  agc ttc cac cgc aag tgg tgg ggg ctc aac ctg cag ttc ctg ctg gtt      2212
214  Ser Phe His Arg Lys Trp Trp Gly Leu Asn Leu Gln Phe Leu Leu Val
215          715             720             725
217  ttc ctc tgc acc ttc atg cag att gtc atc tgt gtg atc tgg ctc tac      2260
218  Phe Leu Cys Thr Phe Met Gln Ile Val Ile Cys Val Ile Trp Leu Tyr
219      730             735             740
221  acc gcg ccc ccc tca agc tac cgc aac cag gag ctg gag gat gag atc      2308
222  Thr Ala Pro Pro Ser Ser Tyr Arg Asn Gln Glu Leu Glu Asp Glu Ile
223  745             750             755             760
225  atc ttc atc acg tgc cac gag ggc tcc ctc atg gcc ctg ggc ttc ctg      2356
226  Ile Phe Ile Thr Cys His Glu Gly Ser Leu Met Ala Leu Gly Phe Leu
227              765             770             775
229  atc ggc tac acc tgc ctg ctg gct gcc atc tgc ttc ttc ttt gcc ttc      2404
230  Ile Gly Tyr Thr Cys Leu Leu Ala Ala Ile Cys Phe Phe Phe Ala Phe
231              780             785             790
233  aag tcc cgg aag ctg ccg gag aac ttc aat gaa gcc aag ttc atc acc      2452
234  Lys Ser Arg Lys Leu Pro Glu Asn Phe Asn Glu Ala Lys Phe Ile Thr
235          795             800             805
237  ttc agc atg ctc atc ttc ttc atc gtc tgg atc tcc ttc att cca gcc      2500
238  Phe Ser Met Leu Ile Phe Phe Ile Val Trp Ile Ser Phe Ile Pro Ala
239          810             815             820
241  tat gcc agc acc tat ggc aag ttt gtc tct gcc gta gag gtg att gcc      2548
242  Tyr Ala Ser Thr Tyr Gly Lys Phe Val Ser Ala Val Glu Val Ile Ala
243  825             830             835             840
245  atc ctg gca gcc agc ttt ggc ttg ctg gcg tgc atc ttc ttc aac aag      2596
246  Ile Leu Ala Ala Ser Phe Gly Leu Leu Ala Cys Ile Phe Phe Asn Lys
247              845             850             855
249  acc tac atc att ctc ttc aag cca tcc cgc aac acc atc gag gag gtg      2644
250  Thr Tyr Ile Ile Leu Phe Lys Pro Ser Arg Asn Thr Ile Glu Glu Val
251              860             865             870
253  cgt tgc agc acc gca cgt cac gct ttc aag gtg gct gcc cgg gcc acg      2692
254  Arg Cys Ser Thr Ala Arg His Ala Phe Lys Val Ala Ala Arg Ala Thr
255          875             880             885
257  ctg cgc cgc agc aac gtc tcc cgc aag cgg tcc agc agc ctt gga ggc      2740
258  Leu Arg Arg Ser Asn Val Ser Arg Lys Arg Ser Ser Ser Leu Gly Gly
259      890             895             900
261  tcc acg gga tcc acc ccc tcc tcc tcc atc agc agc aag agc aac agc      2788
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RAW SEQUENCE LISTING   DATE: 12/17/2001
PATENT APPLICATION: US/10/002,854   TIME: 20:19:56

Input Set : A:\Pto.amc
Output Set: N:\CRF3\12172001\J002854.raw

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262  Ser Thr Gly Ser Thr Pro Ser Ser Ser Ile Ser Ser Lys Ser Asn Ser
263  905             910             915             920
265  gaa gac cca ttc cca cag ccc gag agg cag aag cag cag cag ccg ctg    2836
266  Glu Asp Pro Phe Pro Gln Pro Glu Arg Gln Lys Gln Gln Gln Pro Leu
267          925             930             935
269  gcc cta acc cag caa gag cag cag cag cag ccc ctg acc ctc cca cag    2884
270  Ala Leu Thr Gln Gln Glu Gln Gln Gln Gln Pro Leu Thr Leu Pro Gln
271          940             945     .       950
273  cag caa cga tct cag cag cag ccc aga tgc aag cag aag gtc atc ttt    2932
274  Gln Gln Arg Ser Gln Gln Gln Pro Arg Cys Lys Gln Lys Val Ile Phe
275          955             960             965
277  ggc agc ggc acg gtc acc ttc tca ctg agc ttt gat gag cct cag aag    2980
278  Gly Ser Gly Thr Val Thr Phe Ser Leu Ser Phe Asp Glu Pro Gln Lys
279      970             975             980
281  aac gcc atg gcc cac agg aat tct acg cac cag aac tcc ctg gag gcc    3028
282  Asn Ala Met Ala His Arg Asn Ser Thr His Gln Asn Ser Leu Glu Ala
283  985             990             995             1000
285  cag aaa agc agc gat acg ctg acc cga cac cag cca tta ctc ccg ctg    3076
286  Gln Lys Ser Ser Asp Thr Leu Thr Arg His Gln Pro Leu Leu Pro Leu
287              1005    .       1010            1015
289  cag tgc ggg gaa acg gac tta gat ctg acc gtc cag gaa aca ggt ctg    3124
290  Gln Cys Gly Glu Thr Asp Leu Asp Leu Thr Val Gln Glu Thr Gly Leu
291              1020            1025            1030
293  caa gga cct gtg ggt gga gac cag cgg cca gag gtg gag gac cct gaa    3172
294  Gln Gly Pro Val Gly Gly Asp Gln Arg Pro Glu Val Glu Asp Pro Glu
295          1035            1040            1045
297  gag ttg tcc cca gca ctt gta gtg tcc agt tca cag agc ttt gtc atc    3220
298  Glu Leu Ser Pro Ala Leu Val Val Ser Ser Ser Gln Ser Phe Val Ile
299      1050            1055            1060
301  agt ggt gga ggc agc act gtt aca gaa aac gta gtg aat tca            3262
302  Ser Gly Gly Gly Ser Thr Val Thr Glu Asn Val Val Asn Ser
303  1065            1070            1075
305  taaaatggaa ggagaagact gggctaggga gaatgcagag aggtttcttg gggtcccagg   3322
306  gatgaggaat cgccccagac tcctttcctc tgaggaaga                         3361
308  <210> SEQ ID NO: 2
309  <211> LENGTH: 1078
310  <212> TYPE: PRT
311  <213> ORGANISM: Homo sapiens
313  <220> FEATURE:
314  <221> NAME/KEY: PEPTIDE
315  <222> LOCATION: (1)...(1078)
316  <223> OTHER INFORMATION: Ca-sensing Receptor
318  <400> SEQUENCE: 2
319  Met Ala Phe Tyr Ser Cys Cys Trp Val Leu Leu Ala Leu Thr Trp His
320  1           5               10              15
321  Thr Ser Ala Tyr Gly Pro Asp Gln Arg Ala Gln Lys Lys Gly Asp Ile
322              20              25              30
323  Ile Leu Gly Gly Leu Phe Pro Ile His Phe Gly Val Ala Ala Lys Asp
324          35              40              45
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VERIFICATION SUMMARY   DATE: 12/17/2001
PATENT APPLICATION: **US/10/002,854**   TIME: 20:19:57

Input Set : **A:\Pto.amc**
Output Set: **N:\CRF3\12172001\J002854.raw**

L:15 M:270 C: Current Application Number differs, Replaced Current Application No
L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date